

U.S. Navy Effort Aims To 'Equip the Man'

By JASON SHERMAN

New weapon systems being developed for the U.S. Navy soon will have to pass muster with experts looking to ensure close attention is paid to how these technologies affect sailor performance.

Spawned from an effort launched by the chief of naval operations, the new Human Systems Integration directorate was established Oct. 1 in Naval Sea Systems Command to play a role in new weapon projects.

"In the past, we've built systems and just expected sailors to adapt to them," said Greg Maxwell, head of the Human Systems Integration directorate and deputy commander of Naval Sea Systems Command. "Now we want to design systems with sailors' input and recommendations addressed up front, so crews can perform tasks more efficiently and with fewer people. Instead of manning equipment, we

want to equip the man."

Vice Adm. Phillip Balisle, who heads Naval Sea Systems Command in Washington, has charged the Human Systems Integration directorate with certifying that systems delivered to the fleet "enhance sailor performance, optimize manpower and training, and promote safety, survivability and quality of service."

Balisle laid out these thoughts in a Sept. 11 memo to his command detailing the responsibilities of the new directorate, including:

- Establishing human systems integration policy and standards.

- Developing techniques for evaluating human performance.

- Reviewing acquisition programs periodically.

The directorate is establishing formal guidelines for measuring sailor performance early in weapon acquisition programs. In the same way performance requirements are carved out for, say,

a new missile that must hit its target 90 percent of the time, a similar metric may be established for human performance on a system.

"Do you want the operator on the console making an accurate decision 100 percent of the time, 90 percent of the time, or 80 percent of the time?" Maxwell said. "The answer to that will drive your design."

The new directorate hopes by early December to have standards for sailor response time, accuracy and workload.

The directorate also will look at major acquisition programs to see if anyone involved in the Navy effort has an expertise in human systems. Involvement of human-systems experts in writing the operational requirements or the test and evaluation master plans are signs that sailor performance is being attended, said Bob Bost, the director of the optimal manning program at Naval Sea Systems Command and

Maxwell's deputy in the new office.

The new directorate has not finalized its staff. "We don't need a lot of people," said Maxwell. But the group will include systems engineers, training expertise, program analysis and budget experts "so that we can do our certifications properly," he said.

Maxwell declined to discuss the new office's budget, which he said also remains to be set.

The directorate means more requirements for program managers and their program-executive-officer bosses. Scott Truver, a naval expert and vice president for national security for Anteon Corp., Fairfax, Va., said human systems integration will be adopted formally into the acquisition process.

"It will present some additional requirements, but it's been coming and needed for a long time. Is it going to be onerous? I guess the answer depends on how enlightened a program manager will be," Tru-

ver said.

But shipbuilders have long studied ways to improve sailor performance, said Jerri Fuller Dickseski, spokeswoman for Newport News Shipbuilding in Newport News, Va., which hopes to build the Navy's CVN(X) next-generation aircraft carrier.

"What we did many, many years ago was bring in sailors and crew members of all different levels and look at what they did, from operating weapon systems to food service. A lot of what we learned from them we are incorporating in the CVN(X) design," Dickseski said.

The new directorate is part of a broader set of changes to the Navy's training and education operation set in motion by a task force chartered by Adm. Vern Clark, chief of naval operations. These changes include reorganizing 14 technical learning centers of excellence, and establishing new high-level responsibility for Navy training. ■

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Defense News
14 October 2002